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AMENDMENTS TO THE CLAIMS

Claim 1 (original): A neutral phenol oxidase having the following properties:

- (1) optimum pH: being from 5.0 to 7.0, and
- (2) substrate specificity:
 - i) catalyzing a coloring reaction by an oxidation of each of N,N-dimethyl-para-phenylenediamine, ortho-aminophenol, 2,6-dimethoxyphenol, 1,3-dihydroxynaphthol, and 4-hydroxyindole at a pH of around 6.5; and
 - ii) catalyzing an oxidative polymerization reaction of alkali extract of lignin.

Claim 2 (original): The neutral phenol oxidase according to claim 1, further having the following properties (3) to (7):

- (3) 28 kDa (calculated by SDS-PAGE),
- (4) pH stability: maintaining a relative remaining activity of at least 70 % under incubation conditions at a pH of 8.0 to 9.0 for 20 hours at 30°C,
- (5) optimum temperature: being from 30° to 50°C,
- (6) thermal stability:
 - I) maintaining a relative remaining activity of at least 80 % under incubation conditions at 0° to 30°C for 1 hour at a pH of 7.0, as compared with an activity before incubation, and
 - II) maintaining a relative remaining activity of at least 90 % under incubation conditions at 0 to 30°C for 1 hour at a pH of 9.0, as compared with an activity before incubation, and
- (7) isoelectric point: being about 7.4;

or the following properties (3') to (7'):

(3') 35 kDa (calculated by SDS-PAGE),

(4') pH stability: maintaining a relative remaining activity of at least 75 % under incubation conditions at a pH of 7.0 to 10.0 for 20 hours at 30°C,

(5') optimum temperature: being from 30° to 60°C,

(6') thermal stability:

I') maintaining a relative remaining activity of at least 90 % under incubation conditions at 0° to 50°C for 1 hour at pH 7.0, as compared with an activity before incubation, and

II') maintaining a relative remaining activity of at least 70 % under incubation conditions at 0° to 50°C for 1 hour at a pH of 9.0, as compared with an activity before incubation, and

(7') isoelectric point: being about 6.8;

or the following properties (3'') to (7''):

(3'') 45 kDa (calculated by SDS-PAGE),

(4'') pH stability: maintaining a relative remaining activity of at least 70 % under incubation conditions at a pH of 8.0 to 10.0 for 20 hours at 30°C,

(5'') optimum temperature: being from 30° to 60°C

(6'') thermal stability:

I'') maintaining a relative remaining activity of at least 80 % under incubation conditions at 0° to 30°C for 1 hour at a pH of 7.0, as compared with an activity before incubation, and

II'') maintaining a relative remaining activity of at least 90 % under incubation conditions at 0° to 40°C for 1 hour at pH 9.0 , as compared with an activity before incubation, and

(7'') isoelectric point: being about 6.8.

Claim 3 (original): The neutral phenol oxidase according to claim 1 or 2, wherein the neutral phenol oxidase is produced by a basidiomycete belonging to the genus *Flammulina*.

Claim 4 (currently amended): The neutral phenol oxidase according to ~~any one of claims 1 to 3~~ claim 1, wherein the basidiomycete belonging to the genus *Flammulina* is a basidiomycete belonging to *Flammulina velutipes*.

Claim 5 (currently amended): The neutral phenol oxidase according to ~~any one of claims 1 to 4~~ claim 1, wherein the basidiomycete belonging to *Flammulina velutipes* is *Flammulina velutipes* IFO 30601 strain.

Claim 6 (original): A production method of a neutral phenol oxidase, characterized in that a basidiomycete belonging to the genus *Flammulina* is cultured at a pH of 6.0 to 12.0.

Claim 7 (original): The production method according to claim 6, wherein the neutral phenol oxidase is the neutral phenol oxidase of claim 1 or 2.

Claim 8 (currently amended): An antibody raised against the neutral phenol oxidase of ~~any one of claims 1 to 5~~ claim 1.

Claim 9 (currently amended): A dyeing composition comprising the neutral phenol oxidase of ~~any one of claims 1 to 5~~ claim 1.

Claim 10 (original): The dyeing composition according to claim 9, further comprising a dye.

Claim 11 (currently amended): A dyeing method, characterized in that a subject to be dyed is brought into contact with a dye in the presence of the neutral phenol oxidase of ~~any one of claims 1 to 5~~ claim 1, thereby dyeing the subject to be dyed.